

**Department of Civil Engineering, University of Florida**  
**New Infrastructure Engineering and Management/Best Practices**

CGN 5606/CGN 4600, Section: 1FE2, 2FED, HYBR, OVER /CAMP

**Class Periods:** Thursday 7-9 (1:55- 4:55 pm)

**Location:** New Engineering Building(NEB)- 102

**Academic Term:** Fall 2024

***Instructor:***

Name: Dr. Fazil T. Najafi, Professor

Email Address: fnaja@ce.ufl.edu

Phone Number: (352) 870-2477

Office Hours: Wednesday, 6:00 – 9:00 pm

**\*Please call or email. I will respond by phone, email, or zoom within 24 hours.\***

***Teaching Assistant:***

Please contact through the Canvas website

Name: Vani Ruchika Pabba

Email Address: vaniruchikapabba@ufl.edu

Office hours: Tuesday 6:00 to 8:00 pm

Please email me. I will respond by email or zoom within 24 hours.

***Course Description***

New Infrastructure Engineering and Management/Best Practices is a three-credit hours course. The course covers the medium-sized city's organizational and management, emphasizing the engineer role. It includes duties and administrative responsibilities of various operating divisions emphasizing each Department's role in managing the city's infrastructure issues to help its citizens.

***Course Pre-Requisites / Co-Requisites***

No prerequisites are required.

***Course Objectives***

The objectives of this course are:

1. Learn city organizations and management. Structure.
2. Develop leadership and communication skills, which are essential requirements for any manager.
3. Learn the city's finance, budgeting, and capital management.
4. Apply knowledge from previous civil engineering courses to solve the city's engineering problems.
5. Learn the city's infrastructure related to roadways, rail, air transport systems, port and harbor systems, buildings, stormwater, wastewater, potable water systems, solid waste, and Fire Protection.
6. Learn legal aspects in the management of city infrastructure.
7. Learn fleet management.
8. Infrastructure Cyber-security.
9. Construction Contract Management.
10. Utility Approval Construction Process.
11. Pavement Management
12. Maintenance of building and grounds.

***Course Outcomes***

1. The course will achieve the objectives mentioned above.
2. The course meets ABET Outcome Number 5: an ability to function effectively on a team whose members provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
3. The course homework assignment will help you develop presentation skills essential throughout your academic and professional careers.

4. Develop a solid understanding of engineering research and prepare a high-quality research paper in your area of interest.
5. Hone your research and analysis skills by adopting a research-based mindset to solve scientific engineering problems with real-world applications and implications. Your results will contribute to the advancement of knowledge and benefit society

### ***Materials and Supply Fees***

Not applicable

### ***Required Textbooks and Software***

No textbooks are required, and all materials are in the files folder in CANVAS.

### ***Recommended Materials***

All materials are provided in Files section on CANVAS

### ***Required Computer***

UF student computing requirement: <https://news.it.ufl.edu/education/student-computing-requirements-for-uf/>

### ***Course Schedule and Important Dates***

Refer Weekly schedule excel document

### ***Najafi's Lectures and Guest Speakers***

This course will involve guest speakers and Dr. Najafi's lecture on the content of Najafi's book. Students must prepare one-page summaries of Dr. Najafi's and the guest speaker's lecture presentations that are due via Canvas per the weekly schedule instructions. Each student's one-page summary should include the subject title, the goal and objective of the lectures you are learning, and conclusions with your opinions and thoughts. Keep the one-page or two-page summaries in bullet format.

### ***Groups***

I grouped students on CANVAS from a combination of in-class and online students. Each group should have a group leader. Groups must give each other member names, phone numbers, email addresses, and Zoom links. Group leaders work closely with their group members to work on their research outlined in the weekly schedule. Group work requires equal participation and contribution from each group member in writing the paper and creating the audio PowerPoint video presentation. Only group leaders submit group assignments on Canvas.

### ***Research Paper and PPT Video Presentation Guidelines***

- Topic Selection: Collaborate with group members to develop a research paper title that aligns with everyone's interests.
- Research: Use the UF library and databases to find relevant journal articles and information.
- References: Use Endnote Online to cite articles or papers.
- Paper Requirements:
  - Minimum 8000 words (excluding figures, tables, and references).
  - Format: English, Times New Roman, 12-point font, 1-inch margins, single or double spacing.
  - Sections to include:
    - Title, Abstract, Keywords
    - Introduction/Literature Review
    - Objectives
    - Methods
    - Results and Discussion
    - Conclusions
    - Recommendations & References
    - Acknowledgments & Bios
- PPT Presentation: Create a 15-minute audio-visual PowerPoint to present your research findings.

### ***Attendance Policy, Class Expectations, and Make-Up Policy***

The face-to-face class lecture session is every Thursday, from 7-9 (1:55 pm - 4:55 pm) in New Engineering building NEB-102. Off-campus students can watch the recorded video lecture on Canvas under the Modules weekly TODO section. The weekly schedule shows what is expected of you each week. Lectures, assignments, and assignment due dates are all listed there. Contact the TA or the Professor if you have questions about the weekly schedule. Each student must prepare a one-page summary of Dr. Najafi and guest speakers' presentations submitted on CANVAS per the deadline listed on the weekly schedule. The page summary grade is part of class attendance. Assignment due dates are shown on the weekly schedule to upload on CANVAS. Late submissions will NOT be accepted.

Excused absences must be consistent with university policies in the Graduate Catalog (<https://catalog.ufl.edu/graduate/regulations>) and require appropriate documentation. Additional information can be found here: <https://gradcatalog.ufl.edu/graduate/regulations/>

### ***Evaluation of Grades***

<b>Assignment</b>	<b>Total Points</b>	<b>Percentage of Final Grade</b>
Group Assignments (6)(1 submission per group)	100 each	15%
Lecture Summary(13)(individual)	100 each	5%
Q&A Assignment(6)(group)	100 each	10%
Recorded video & PPT of Research paper(group)	100	10%
Final Exam (individual)	100	30%
Research Paper (group)	100	30%
		100%

### ***Grading Policy***

The following is given as an example only.

<b>Percent</b>	<b>Grade</b>	<b>Grade Points</b>
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

More information on UF grading policy may be found at:

[UF Graduate Catalog](#)  
[Grades and Grading Policies](#)

### ***Students Requiring Accommodations***

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### ***Course Evaluation***

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.a.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.a.ufl.edu/public-results/>.

### ***In-Class Recording***

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

### ***University Honesty Policy***

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### ***Commitment to a Safe and Inclusive Learning Environment***

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University’s core values, including the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of race, creed,

color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Coordinator
- HWC OE Human Resources, 352-392-0904, [student-support-hr@eng.ufl.edu](mailto:student-support-hr@eng.ufl.edu)
- Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, [pld@ufl.edu](mailto:pld@ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)

### ***Software Use***

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

### ***Student Privacy***

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

### ***Campus Resources:***

#### ***Health and Wellness***

##### **U Matter, We Care:**

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

**Counseling and Wellness Center:** <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

##### **Sexual Discrimination, Harassment, Assault, or Violence**

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, [title-ix@ufl.edu](mailto:title-ix@ufl.edu)

##### **Sexual Assault Recovery Services (SARS)**

Student Health Care Center, 392-1161.

**University Police Department** at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

#### ***Academic Resources***

**E-learning technical support**, 352-392-4357 (select option 2) or e-mail to [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu).  
<https://elearning.ufl.edu/>.

**Career Connections Center**, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

**Library Support**, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

**Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.  
<https://teachingcenter.ufl.edu/>.

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers.  
<https://writing.ufl.edu/writing-studio/>.

**Student Complaints Campus**: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

**On-Line Students Complaints**: <https://distance.ufl.edu/getting-help/>; <https://distance.ufl.edu/state-authorization-status/#student-complaint>.